

Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell Data Sheet

Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell

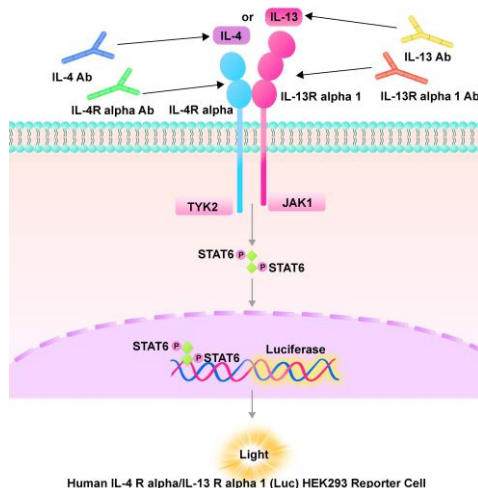
Catalog No.	Size
CHEK-ATF075	2 × (1 vial contains ~5×10 ⁶ cells)

• Description

The Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell with endogenous IL-4 R alpha and IL-13 R alpha 1 expression was engineered to express STAT6 signaling response element. When stimulated with human IL-4 or IL-13 protein, receptor-mediated signaling can drive STAT6-mediated luminescence. Neutralization of biological effect of human IL-4 and IL-13 protein by corresponding antibody results in a decrease in luminescence.

• Application

- Screen for neutralizing antibodies blocking the stimulation of human IL-4 and IL-13 protein.



• Cell Line Profile

Cell line	Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell
Host Cell	HEK293
Property	Adherent
Complete Growth Medium	DMEM + 10% FBS
Selection Marker	Puromycin (2 µg/mL)
Incubation	37°C with 5% CO ₂
Doubling Time	22-24 hours
Transduction Technique	Lentivirus

Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell Data Sheet

• *Materials Required for Cell Culture*

- DMEM medium (Gibco, Cat.No.11965-092)
- Fetal bovine serum (CellMax, Cat.No.SA211.02)
- Puromycin (InvivoGen, Cat.No.ant-pr-5b)
- Complete Growth Medium: DMEM + 10% FBS
- Culture Medium: DMEM + 10% FBS, Puromycin (2 µg/mL)
- Freeze Medium: 90% FBS, 10% (V/V) DMSO
- T-75 Culture flask (Corning, 430641)
- Cryogenic storage vials (SARSTEDT, 72.379.007)
- Thermostat water bath
- Centrifuge
- Luna cell counter (Logos Biosystems, LUNA- II)
- CO₂ Incubator (Thermo, 3111)
- Biological Safety Cabinet (Thermo, 1389)

• *Recovery*

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the cap out of the water. Thawing should be rapid (approximately 2 minutes).
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by spraying with 70% ethanol. All the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 4.0 mL complete growth medium and spin at approximately 1000 rpm for 5 minutes.
4. Discard the supernatant and resuspend cell pellet with 5 mL complete growth medium and transfer the cell suspension into T-75 flask containing 10-15 mL of pre-warmed complete growth medium.
5. Incubate at 37°C with 5% CO₂ incubator.

Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell Data Sheet

• *Subculture*

1. Remove and discard culture medium.
2. Wash the cells once with sterile PBS.
3. Add 2 mL of 0.25% trypsin to cell culture flask. Place the flask at 37°C for 2-3 minutes, until 90% of the cells have detached.
4. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting.
5. Add appropriate aliquots of the cell suspension to new culture vessel.
6. Incubate at 37°C with 5% CO₂ incubator.

- **Subcultivation Ratio:** A subcultivation ratio of 1:6 to 1:10 is recommended.

- **Medium Renewal:** Every 2 to 3 days.

• *Cryopreservation*

1. Remove and discard spent medium.
2. Detach cells from the cell culture flasks with 0.25% trypsin.
3. Centrifuge at 1000 rpm for 5 min at RT to pellet cells.
4. Resuspend the cell pellets with complete growth medium and count viable cells.
5. Centrifuge at 1000 rpm for 5 min at RT and resuspend cells in freezing medium to a concentration of 5×10^6 to 1×10^7 cells/mL.
6. Aliquot into cryogenic storage vials. Place vials in a programmable cooler or an insulated box placed in a -80°C freezer overnight, then transferring to liquid nitrogen storage.

• *Storage*

- **Product format:** Frozen

- **Storage conditions:** Liquid nitrogen immediately upon receipt

Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell Data Sheet

• *Signaling Bioassay*

Human IL-4 Protein Stimulation (RLU)

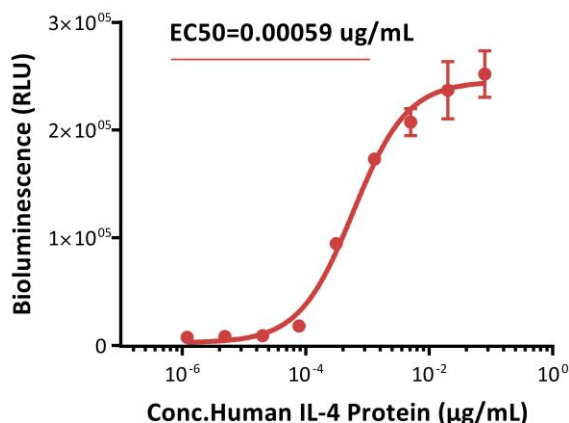


Fig1. Response to human IL-4 protein (RLU). The Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-4 protein (Cat.No.IL4-H4218). The EC50 was approximately 0.00059 µg/mL.

Human IL-4 Protein Stimulation (FOLD)

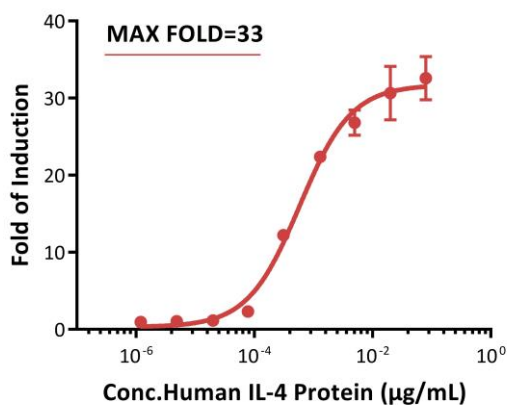


Fig2. Response to human IL-4 protein (FOLD). The Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-4 protein (Cat.No.IL4-H4218). The max induction fold was approximately 33.

Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell Data Sheet

Human IL-13 Protein Stimulation (RLU)

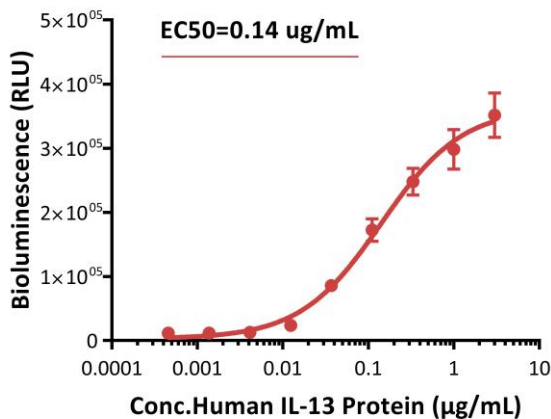


Fig3. Response to human IL-13 protein (RLU). The Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-13 protein (Cat.No.IL3-H52H4). The EC50 was approximately 0.14 µg/mL.

Human IL-13 Protein Stimulation (FOLD)

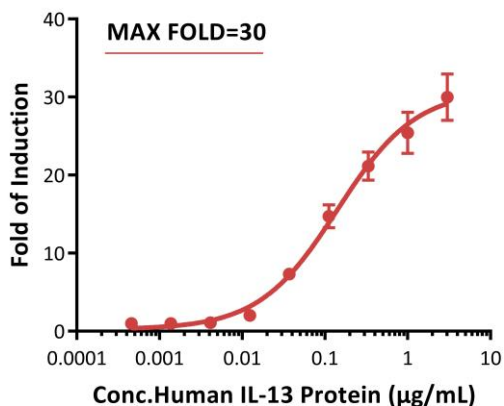


Fig4. Response to human IL-13 protein (FOLD). The Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-13 protein (Cat.No.IL3-H52H4). The max induction fold was approximately 30.

Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell Data Sheet

• *Application*

Anti-human IL-4 R alpha Neutralizing Antibody Screening

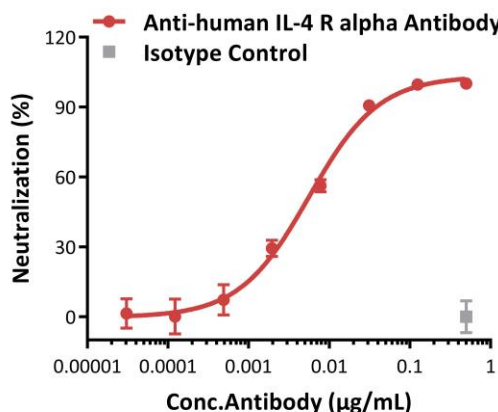


Fig5. Inhibition of human IL-4 protein-induced reporter activity by anti-human IL-4 R alpha neutralizing antibody. This reporter cell was incubated with serial dilutions of antibodies in the presence of human IL-4 protein (Cat.No.IL4-H4218) with a final concentration of 0.002 µg/mL. The EC50 of anti-human IL-4 R alpha neutralizing antibody is approximately 0.0054 µg/mL.

Anti-human IL-4 R alpha Neutralizing Antibody Screening

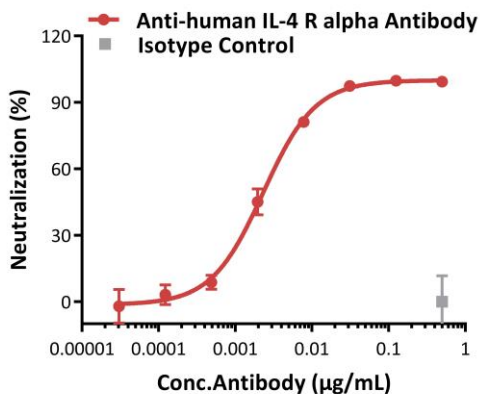


Fig6. Inhibition of human IL-13 protein-induced reporter activity by anti-human IL-4 R alpha neutralizing antibody. This reporter cell was incubated with serial dilutions of antibodies in the presence of human IL-13 protein (Cat.No.IL3-H52H4) with a final concentration of 0.1 µg/mL. The EC50 of anti-human IL-4 R alpha neutralizing antibody is approximately 0.0023 µg/mL.

Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell Data Sheet

• Passage Stability

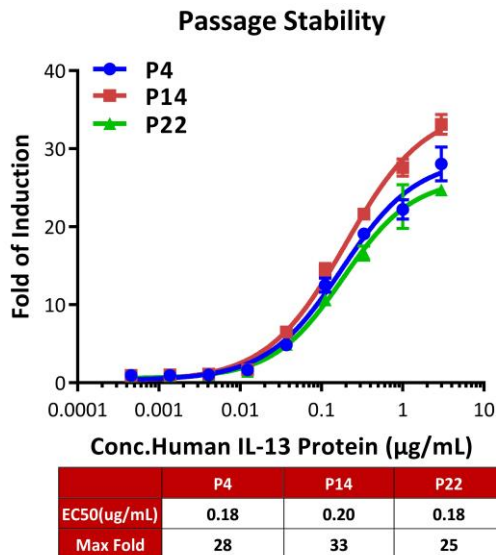


Fig6. Passage stability analysis by Signaling Bioassay. The continuously growing Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-13 protein. Human IL-13 protein stimulated response demonstrates passage stabilization (fold induction and EC50) across passage 4-22.

• License Disclosure

This reporter cell is provided for research use only. This license does not permit you to share, distribute, sell, sublicense, or otherwise make this reporter cell available for use to other laboratories, departments, research institutions, hospitals, universities, or biotech companies. The license does not permit modification of this reporter cell in any way. Inappropriate use or distribution of this reporter cell will result in revocation of the license. Modifications of this cell line, transfer to another facility, or commercial use of the cells may require a separate license and additional fees. AcroBiosystems does not warrant the suitability of this reporter cell for any particular use, and does not accept any liability in connection with the handling or use of this reporter cell.

• Related Products

Products

Human IL-4 Protein, premium grade
Human IL-13 Protein, His Tag

Cat.No.

IL4-H4218
IL3-H52H4